**Software Requirements Specification (SRS) Document**

**E Commerce Web Application**

***Version 1.0 | Date: 27-02-2024***

**1. Introduction**

**1.1 Problem Statement**

In today's fast-paced world, consumers seek efficient and user-friendly platforms for their online shopping needs. Traditional brick-and-mortar stores are gradually being replaced by E-commerce websites that offer a vast array of products at the convenience of a click. However, developing a seamless and secure E-commerce platform involves overcoming several challenges. Our project aims to address these challenges by creating a robust E-commerce website that provides a user-friendly interface, secure transactions, and scalability, ultimately enhancing the online shopping experience for users.

**1.2 Scope**

The system will consist of a Flask backend, ReactJS frontend, and MongoDB database. It will be hosted on a cloud platform to ensure accessibility and scalability. Users can register, log in, view products, add products to the cart, and complete transactions.

**1.3 Definitions, Acronyms, and Abbreviations**

* **Flask:** A micro web framework for Python.
* **ReactJS:** A JavaScript library for building user interfaces.
* **MongoDB:** A NoSQL database.
* **SRS:** Software Requirements Specification.

**2. System Overview**

**2.1 System Description**

The E-commerce website will provide a user-friendly interface for customers to interact with the platform. It will facilitate product browsing, selection, and purchase.

**2.2 System Architecture**

The system will follow a three-tier architecture:

* Frontend (ReactJS)
* Backend (Flask)
* Database (MongoDB)

**3. Functional Requirements**

**3.1 User Registration**

* Users can register with a unique username and password.
* User details (name, email, etc.) will be stored securely.

**3.2 User Authentication**

* Users can log in using their registered credentials.
* Sessions will be managed securely.

**3.3 Product Management**

* Products will be categorized and displayed with details.
* Admin can add, edit, or remove products.

3.4 Shopping Cart

* Users can add products to their cart.
* Cart content will persist across user sessions.

3.5 Order Placement

* Users can review their cart and place orders securely.
* Order details will be stored for reference.

3.6 User Profile

* Users can view and update their profile information.

3.7 Search and Filters

* Users can search for products based on keywords.
* Filters for categories, price range, etc., will be available.

**4. Non-functional Requirements**

4.1 Performance

* The system should handle a concurrent user load of [X] users.
* Response time for actions should be within [Y] seconds.

4.2 Security

* User passwords should be encrypted and stored securely.
* Secure communication (HTTPS) should be implemented.

4.3 Scalability

* The system should be scalable to accommodate increasing users and products.

4.4 Reliability

* The system should have a backup and recovery mechanism.

**5. User Interface Design**

5.1 Homepage

* Featured products, promotions, and navigation links.

5.2 Product Page

* Clear product images, descriptions, and pricing.

5.3 Cart Page

* List of added items, quantity adjustment, and total price.

**6. Deployment**

**6.1 Hosting**

* The system will be hosted on a cloud platform (e.g., AWS, Azure).

**6.2 Deployment Process**

* Continuous integration and deployment will be implemented.

**7. User Hardware and Software Requirements**

**7.1 User Hardware Requirements**

* Device: Any modern device (PC, laptop, tablet, or smartphone)
* Internet Connection: Stable high-speed connection

**7.2 User Software Requirements**

* Web Browser: Latest version of Google Chrome, Mozilla Firefox, Safari, or Microsoft Edge

**8. Conclusion**

This Software Requirements Specification (SRS) document outlines the features and functionalities of the E-commerce website. It serves as a foundation for the development team to proceed with the implementation and testing phases.